

Family Card Security System Using Biometric Device

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Abstract—This system mainly focuses on Designing and Implementation of Security System for a family card using fingerprint that has been used to the Civil Supply Corporation. In recent scenarios, all public and private sectors using smart card systems to provide security. Still, it is not up to the security level, this system overcomes that problem by using Biometric device for the Civil Supply Corporation. All the public sectors distribute the products to all the citizens. There are various commodities like wheat, Rice, sugar and kerosene which are distributed using conventional ration shops. Here the family members need to register with their fingerprints to get the unique family ID by using this unique ID. The family members can access the commodities and access control will be provided for the family members and the administrator. Only an authorized person can access the system. We aim to provide security and transparency of authorization allocations of commodities equally to all the using citizen of India.

Keywords—Civil Supply Corporation, Fingerprint Classification, Public Distribution System.

I. INTRODUCTION

This system mainly focuses on Designing and Implementation of Security System for a family card using fingerprint that has been used to the Civil Supply Corporation. In recent scenarios, all public and private sectors using smart card systems to provide security [1]. Still, it is not up to the security level, this system overcomes that problem by using Biometric device for the Civil Supply Corporation. All the public sectors distribute the products to all the citizens. There are various commodities like wheat, Rice, sugar and kerosene which are distributed using conventional ration shops. Here the family members need to register with their fingerprints to get the unique family ID by using this unique ID. The family members can access the commodities and access control will be provided for the family members and the administrator. Only an authorized person can access the system. We aim to provide security and transparency of authorization allocations of commodities equally to all the using citizen of India.

II. EXISTING SYSTEM

The present public system using ration cards is issued to eligible families. The records of eligibility and transactions are maintained manually in ration cards and registry books in the fair price shop (FPS).

A. Drawbacks

To Misuse ration cards. According to some estimate 35% of the foodstuff and other commodities allocated for poor families are not reaching them. The number of instances where benefits are being a valid in the names of correctly entitled families without their knowledge.

III. PROPOSED SYSTEM

The main purpose of the Secure Ration System is to reduce the amount of paperwork involved, widespread corruption, misuses of cards and duplications of ration cards. To reduce the time complexity of the manual data entries and checks. Many fake ration card users exist which is against the law, it is used to avoid such things. Our system is used to protect the products of Fair Price Shop in Black markets. Finally the purchased details are sent as SMS to the customer mobile phones.

IV. SYSTEM FEATURE:

A. Friendly End User Interface:

This System provides a friendly interface to end users, it means anyone can easily use this system even for those who have very little knowledge about computer.

B. Secure Process to Distribution of commodities:

- With each customer will aware of all the prices about commodities which are fixed by the government and cannot be changed by the shopkeeper.
- The Customer must know all the commodities of ration shops and distribution for him.
- If the customer is already registered then he cannot allow to register once again in anywhere.

C. Monitoring and Controlling:

- Monthly reports of total commodities and sold details will be fetched by Administrator so that Administrators can decide how much commodities needed by a ration shop and to allocate for next month.
- The Reports says all about left over of the goods with the shopkeeper.

D. To Send Message to the Customer:

This system provides the feature of messaging to the customer about his/her registration and purchased details.

E. To reduce Time complexity:

Here we are using fingerprint classification [3], which helps in reducing the time complexity at the time of matching image and searching the particular person's fingerprint from database to check whether the person is registered or not.

V. SYSTEM ARCHITECTURE

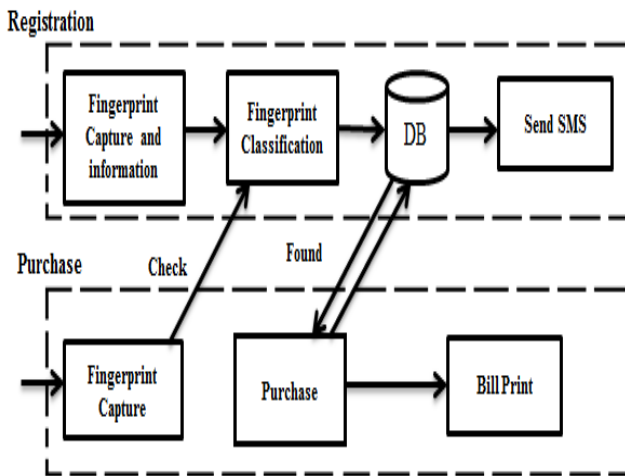


Fig. 1: Architecture Diagram of Family Card Security System Using Biometric Device.

The Working Process of System Architecture in detail:

Registration

First the registration process includes capturing fingerprint from customer and asking required information.

Fingerprint Classification

After getting the fingerprint image it is classified according to the minute points present on it using the template. After this the fingerprint image is stored in a particular database.

SMS

The customer will get the notification of the registration through message. After the purchase, the customer will get billed notification through message.

Purchase

When the customer comes to purchasing commodities he will be asked to fingerprint which will be again classified and compared with the database server. If a match is found true and he can give orders for commodities. Updating will take place in the database simultaneously. Admin can monitor the shopkeeper monthly to decide on the shop owner's next order.

VI. ADVANTAGES

- Centralized record collection.
- Financial records can be maintained without any paperwork.
- Daily monitoring of retailing at each shop can be done by Government.
- Malfunctioning can be found and strict actions can be taken.
- The ration shop owner is bound to maintain Quality of products.
- This will appreciate by middle class and higher middle class people towards the ration shop.
- Level of Satisfaction between people will increase

VII. DISADVANTAGES

- Difficulty in providing an internet connection in rural areas.
-But this problem can overcome since internet is reaching almost all rural areas in India.
- The shopkeeper should have basic knowledge of computer.
-Basic knowledge of computer can be provided to shop owner by conducting training campaigns.

VIII. OUTCOME

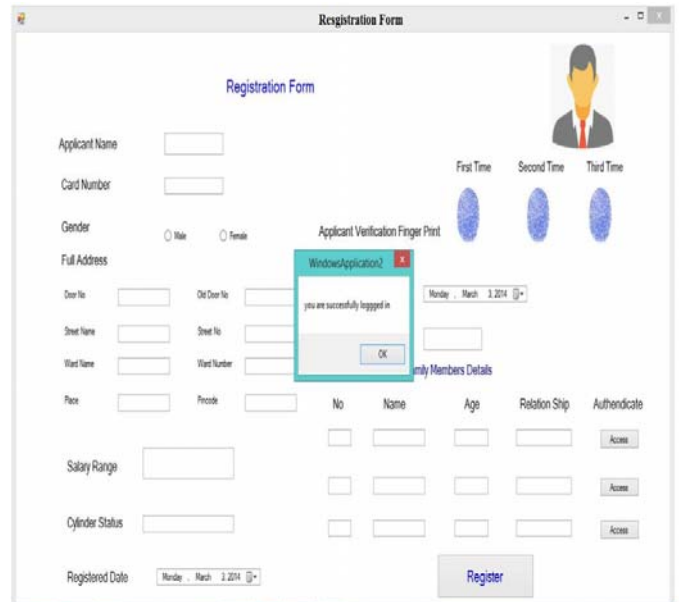


Fig.2: Registration Form

This registration form for customers, who are all eligible candidates to register first here to get Family Card ID.

IX. CONCLUSION

We have computerized manual Ration System to achieve transparency and security. And using this Biometric system we can achieve to protect the ration products at black market sales.

X. FUTURE SCOPE

We can implement this idea in the various systems like Government and Private sectors. We can use other biometric techniques.

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REFERENCES

- [1] Introduce Smartcard to replace Ration card in Tamilnadu.
<http://governancenow.com/node/18986>
- [2] Fingerprint
<http://en.wikipedia.org/wiki/Fingerprint>
- [3] .Fingerprint Classifications
www.cse.msu.edu/biometrics/Publications/Fingerprint/clas.pdf
- [4] Fingerprint Image Enhancement & Minuta Extraction
<http://www.ijcsit.com/docs/Volume%202/vol2issue4/ijcsit2011020481.pdf>